



Liquivision XEN

Bottom Timer, software v2.30

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IMPORTANT NOTICES

WARNING – DANGERS OF DIVING

Scuba diving is a dangerous sport, and can lead to injury, disability or death. Always dive within the limits of your training, skills and experience. Technical diving activities, including decompression diving, mixed gas diving, rebreather diving, wreck and cave diving, all substantially increase the risks of scuba diving.

You can die while diving.

WARNING – ELECTRONICS CAN FAIL – ALWAYS CARRY BACKUP

The XEN bottom timer hardware will fail, like any electronic equipment whose components mature and age. It can fail during your dive and stop providing you with critical information.

You must have a plan to handle a XEN bottom timer failure during your dive. You should carry backup instruments, including a depth gauge and dive watch, and have access to decompression tables.

Do not risk your life on only one source of information.

WARNING – CONDUCT PRE-DIVE CHECKS

It is your responsibility to perform all pre-dive checks recommended in this manual, including checking for software updates and checking battery voltage to ensure the XEN computer has enough battery life to complete your planned dive.

WARNING – ALWAYS CHECK FOR SOFTWARE UPDATES

The XEN bottom timer software likely still has bugs. We have looked for them and tried to eliminate them, but they can still appear during use. Bugs can cause the unit to provide inaccurate or incomplete information, or cause the unit to reset or turn off and stop providing any information at all.

You should always check for software updates

(www.liquivision.com/downloads/XenSoftwareHistory.php)

And install all applicable updates, every time you prepare to use the XEN.

User Agreement and Warranty

Use of your Liquivision XEN is subject to the User Agreement and Warranty (“Agreement”) available at the Liquivision website: www.liquivision.com/xen_manuals.php.

You must read the entire Agreement before using your XEN. If you do not agree with any term of the Agreement, you must not use the XEN, and you may return the XEN to Liquivision or the authorized Liquivision dealer from which you purchased the XEN for a full refund within 30 days after your date of purchase.

If you use the XEN, you are deemed to have agreed to the User Agreement and Warranty.

User Manual

You must read this entire User Manual before using your XEN. Incorrect use of the XEN or its accessories could invalidate your Warranty and can cause permanent damage to the XEN or its accessories.

Liquivision Limitation of Liability

The Agreement includes exclusions and limitations of Liquivision’s liability to you. These exclusions and limitations include, but are not limited to, the following:

YOU AGREE THAT YOU UNDERSTAND AND ACCEPT ALL RISKS ASSOCIATED WITH DIVING, AND THAT LIQUIVISION IS NOT LIABLE TO YOU OR ANY OTHER PERSON, INCLUDING YOUR HEIRS, EXECUTORS OR PERSONAL REPRESENTATIVES, FOR ANY LOSS, DAMAGE, COST, EXPENSE OR CLAIM ARISING OUT OF, CAUSED BY OR RELATING TO YOUR PERSONAL INJURY OR DEATH WHILE DIVING, EVEN IF YOUR PERSONAL INJURY OR DEATH IS CAUSED, IN WHOLE OR IN PART AND DIRECTLY OR INDIRECTLY, BY THE XEN, OR YOUR USE OF THE XEN, AND REGARDLESS OF WHETHER OR NOT THE XEN FUNCTIONED PROPERLY OR WAS DEFECTIVE IN ANY WAY.

YOU HEREBY IRREVOCABLY WAIVE AND RELEASE LIQUIVISION FROM ANY LIABILITY OR OBLIGATION TO YOU OR YOUR HEIRS, EXECUTORS OR PERSONAL REPRESENTATIVES FOR ANY LOSS, DAMAGE, COST, EXPENSE OR CLAIM ARISING OUT OF, CAUSED BY OR RELATING TO YOUR PERSONAL INJURY OR DEATH WHILE DIVING, EVEN IF YOUR PERSONAL INJURY OR DEATH IS CAUSED, IN WHOLE OR IN PART AND DIRECTLY OR INDIRECTLY, BY THE XEN OR YOUR USE OF THE XEN, AND REGARDLESS OF WHETHER OR NOT THE XEN FUNCTIONED PROPERLY OR WAS DEFECTIVE IN ANY WAY.

You must read the Agreement for all limitations and exclusions of Liquivision’s liability to you.

Trademark Notice

Liquivision, the Liquivision logo, XEN, the XEN logo, and Dive Enlightened are all registered and unregistered trademarks, trade names and service marks of Liquivision Products, Inc. All rights are reserved.

Patent Notice

U.S. and international patents have been applied for to protect the Liquivision Tap-Based Navigation and the Liquivision Ceramic Pressure Sensor Technology. U.S. Patent 8359172, UK Patent GB2455389, other patents pending.

CE

The Liquivision XEN conforms to the requirements of EN 13319 (including EN 61000) and has thus obtained CE certification.

INTRODUCTION – XEN FEATURES

Welcome, and thank you for choosing the Liquivision XEN bottom timer!

The XEN is the first purpose-designed OLED bottom timer in the world, and brings you an exciting set of features focused specifically on your needs:

Hardware Features

- Color OLED (Organic Light Emitting Display) with:
 - Display face angled towards the diver
 - Large fonts
 - 4 different display layouts
 - User-customizable display colors
- Liquivision's patent-pending intuitive tap-based user interface
- Liquivision's patent-pending ceramic pressure sensor technology
- User-changeable lithium battery, both disposable and rechargeable options available.
- Maximum depth -200m (656 ft)
- Accuracy exceeds the limits of EN13319:2000. Operational from sea level to 8,840m/29,000ft
- The XEN will function when its internal temperature is between - 0 to 40°C (32 to 104°F).

If the XEN's internal temperature exceeds 40°C/104°F (in direct sunlight, for example) the OLED display could show some visual disturbances. This is not a product failure – the display will return to normal when the unit is cooled down.

Software Features

- Dive time with seconds, displayed as hr:min:sec or total min:sec
- Average depth with reset option
- Stop watch with seconds display and reset option
- Dark mode allows screen to be dimmed, turned red or turned off for stealth or low-light operations
- Visual alarms
- Lifetime dive log memory (3500 hrs)
- Imperial/Metric settings
- Windows and Mac downloadable (PC interface hardware sold separately)

GETTING STARTED – BEFORE DIVING

Register Your Unit/Activate Your Software

Your XEN comes pre-loaded with bottom-timer software. You will be able to interact with your unit on the surface and run dive simulations immediately. However, the software will not run underwater until you register your unit, obtain a PIN code, and enter this code into your XEN to activate the software.

To register your unit, you must visit: www.liquivision.com/activate.php

During registration, you will be asked to enter your XEN serial number, your real name, address, phone number and a valid email address. You will also be asked to agree and accept the User Agreement and Warranty. Liquivision will then issue you a free XEN Unlock PIN code that you will be able to enter into your XEN (detailed instructions are available here: [Entering Your Free Software Activation PIN & Setting Up Time/Date](#)). At this time, your XEN will unlock its diving features.

Liquivision requires you to register for two reasons:

- a) To Mark the Start of Your Warranty Period: the date and time of your registration will be considered the start of your limited 2 year warranty period
- b) To Collect Contact Information For Critical Customer Communications: the contact information you provide will be stored securely by Liquivision and will be used to contact customers in the event of a critical software upgrade, hardware upgrade, or recall. It will never be sold to third party organizations for any purpose whatsoever.

If you purchase a second-hand XEN unit, you must email Liquivision at info@liquivision.ca and provide the following information:

- XEN serial number
- Date purchased
- Who you purchased your unit from
- Your address, email and phone number
- The sentence “I agree to and accept the XEN User Agreement and Warranty”

This is required to transfer the balance of the Warranty from the previous owner to yourself.

Setup Time/Date & Battery Type

Once you have registered and unlocked your XEN unit, the main screen will say “NOT Ready To Dive: Edit Your Time/Date & Battery Type”.

You will find step-by-step information on how to setup the Time/Date and Battery Type here:
[Example: Entering Your Free Software Activation PIN, Setting Time/Date & Battery Type](#)

Read The Manual

Before your first dive with the XEN, read this manual and make sure you fully understand it. After any period of not using your XEN, we recommend that you re-read the manual to make sure you fully know and understand how to use it.

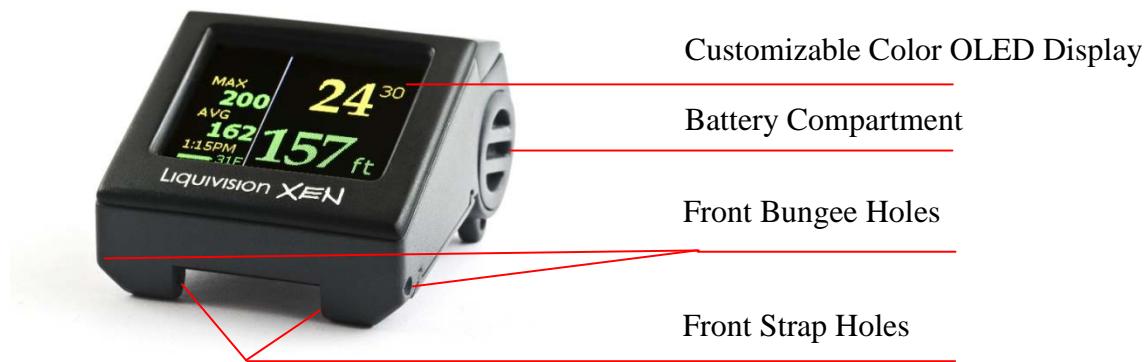
If you have any questions, refer first to this manual, then to the FAQ on the Liquivision website and finally to your XEN dealer.

If none of this helps, contact Liquivision support at www.liquivision.com/contact.php .

Familiarize Yourself With Tap-Navigation

Liquivision's tap-based navigation has what we call a "one beer learning curve". Sit down on your sofa for half an hour with a beer, and tap through the XEN menus to familiarize yourself with the tapping interaction and the general menu layouts.

GETTING STARTED – FEATURES OF YOUR XEN UNIT



HOW TO INSERT THE BUNGEE CORD

- We recommend splitting the bungee in two and using two separate pieces to secure your unit, so if one breaks, the other holds.
- We recommend heat-sealing the knots at the end of the bungee cord (pull the knot away from the XEN casing, heat it up lightly, and form the hot plastic into a hard ball that can't slip back through the bungee hole).

GETTING STARTED – HOW TO TURN ON/TAP YOUR UNIT



Please refer to the short video on tapping provided here: www.liquivision.com/videos.php

For your first XEN interactions, hold your XEN in one hand, and use the other hand to tap it. Once you are familiar with the tapping technique, you will find it easy to tap your XEN when it is on your wrist.

General Tapping/Menu Guidelines

- tap "Down" three or five times* to turn the unit on, or to enter into menu mode
- tap "Down" or "Up" to scroll through menu items
- tap "Left" or "Right" to enter a menu item

*Everywhere in this manual, you will find references to tapping three/five (3/5) times to turn the unit on, or to enter menu mode. The default setting is three times, but you can adjust it to five times if you are concerned about accidental taps causing you to enter menu mode (Preferences -> Tap Count).

Stopwatch Shortcut

First, turn the Stopwatch function on (while diving, tap three/five times to enter the underwater menus, then select "Stopwatch On"). Once this is done, you can access Stopwatch functions directly by tapping your unit three/five times "Left" or "Right". This is a shortcut that allows you to start/stop/reset the Stopwatch without navigating through the usual underwater menus.

Before you can complete a menu action that can cause loss of information, you will be taken to another screen asking you “Are you sure?”. The default answer is “No”. To confirm, you will need to scroll down, and choose “Yes”.

The last item in a menu is “Exit”. On the surface, “Exit” will take you to the previous menu. Underwater, “Exit” will take you back to the dive screen.

There is also a menu timeout:

- if you stay in a surface menu for more than 60 sec., the XEN will timeout to the surface display.
- if you stay in an underwater menu for more than 10 sec., the XEN will timeout to the dive display.

Example: Entering Your Free Software Activation PIN, Setting Time/Date & Battery Type

To turn your XEN on, tap “Down” three/five times in quick succession

1. Your XEN will turn on and you will see this screen:



2. To enter menu mode, tap “Down” three times in quick succession.



3. Your XEN will enter menu mode, and you will see this screen:



4. Tap “Down” once to reach the “Enter PIN” menu.



5. Tap “Left” to enter the “Enter PIN” menu. You will see a line of nine zeroes, and the first one will have a cursor on it.

6. Tap “Up” or “Down” to change the first zero to the first digit of your PIN code. Tapping “Up” will bring the numbers 1-2-3-4-5... in sequence. Tapping “Down” will bring the numbers 9-8-7-6-5.... in sequence.



7. Tap “Left” to move the cursor to the next zero, and once again tap “Up” and “Down” to set the correct value.



8. Repeat this sequence until you have set all digits of the PIN.



9. Once you have entered all the digits of the PIN, tap “Left” once more.

If you enter the correct PIN, you will see the following screen:

If you made a mistake in the PIN, you will return to the “Unit Is Locked” main screen, and you will need to repeat Steps 1-9 again.



If you did enter the correct PIN, you must now setup the Time and Date (Steps 10-13) and select your Battery Type (Steps 14-19) to fully activate your unit.

10. To enter menu mode, tap “Down” three/five times in quick succession.



11. Your XEN will enter menu mode, and you will see this screen: (You may notice that the “Enter PIN” line has disappeared, since you have successfully entered your PIN)



12. Tap “Down” seven times to reach the “Time/Date” item:



13. Tap Left to enter the Time/Date menu. You will see the following list of options. Set up your preferred time format (12h/24h), the time of day, the date and the year.

Once you are satisfied with the Time/Date setup, tap Down to “Exit” and tap Left to select it – you will be taken back to the main menu.

14. Once in the main menu, tap Up twice to reach “Preferences”, and tap Left to select.

15. You will now be in the “Preferences” menu. Tap Down seven times until you reach “Battery Type”, then tap Left to select.

16. You will see a list of battery types.

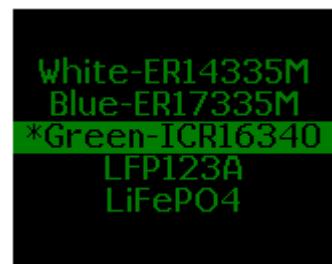
The default is “White -ER14335M” as this is battery type the first XENs shipped with (serial numbers 0 to 1250). If this is the battery you are using, Tap Left to confirm this selection.

If you have a more recent XEN, your unit shipped with a disposable “Blue – ER17335M” battery and you should Tap Down, then Tap Left to select.

If you are using rechargeable batteries:

- “Green – ICR16340” battery: Tap Down twice, then Tap Left to select.
- “LFP123A battery”: Tap Down three times, then Tap Left to select.
- “LiFeP04 battery”: Tap Down four times, then Tap Left to select.

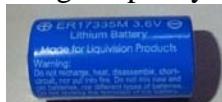
Once you Tap Left to select, you will be automatically taken back to the “Preferences” menu.



A quick word on battery types:

Your XEN is equipped with white battery holders designed for multiple battery types:

- High-capacity disposable ER17335M battery (blue wrap)



- Rechargeable LFP123A (K2) battery (white wrap with green text)



- (DISCONTINUED April 2013) rechargeable ICR16340 battery (green wrap)



- (DISCONTINUED April 2013) rechargeable LiFeP04 3.2V battery (silver wrapper with green text) (Tenergy)



You can order a “Rechargeable Kit” for your XEN (2 rechargeable batteries, a charger and an AC Adapter with international plugs). This is an environmentally-friendly solution that will save you from throwing out many disposable batteries. However, we suggest always having Blue batteries on hand in case you can't access power to recharge the rechargeable ones.

Your XEN is also compatible with the standard-capacity ER14335M battery (white wrap with blue text), though this is not recommended as it has lower capacity and it is physically smaller, so it rattles a bit when inserted into the XEN battery holder.

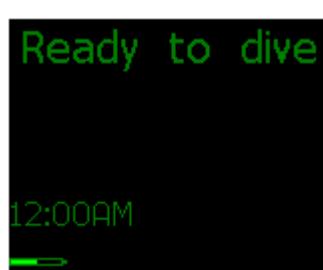


Note: For more information on battery types please refer to [Important Information About XEN Batteries](#).

17. Back in the Preferences menu, tap Down three times to reach “Exit” and tap Left to select it.



18. Back in the Main menu, tap Down four times to reach “Exit” and tap Left to select it.



GETTING STARTED

XEN Surface Display

When you turn your XEN on by tapping “Down” three/five times, it will go to the surface display and show time of day, battery status, and it will say “Ready to dive”.

If you have already dove your XEN, it will display information about last dive. For more about this, refer to the “[Exiting the water](#)” section of the Manual.

If you do not access menus, or enter the water, it will go into Sleep Mode after 5 minutes. It will continue to monitor pressure in Sleep Mode so it will wake up again once you jump in the water and descend below 1.6 m/5.25 ft.

XEN Scroll Bar

Once you have entered the Surface Display, you can enter Menu Mode by tapping your unit three/five times again.

If the list of menu items exceeds the space on the screen, a Scroll Bar will appear on the right of the screen, indicating where you are in the list. A Scroll Bar at the top of your screen means you are the top of the list, a Scroll Bar at the bottom of your screen means you are at the bottom.



First, Check Your Battery!

The XEN displays battery status on its surface display so that you can check your battery power before you dive. It is very important to make sure that you have enough battery power left to complete your planned dive.

The battery status is represented graphically with a battery icon.

- The battery icon is solid green when the battery voltage is:
 - more than 3.30V for disposable Lithium battery (white or blue battery)
 - more than 3.50V for rechargeable Lithium-Ion battery (green battery)
- The battery icon is solid yellow when the battery voltage is:
 - less than 3.30V for disposable Lithium battery (white or blue battery)
 - less than 3.50V for rechargeable Lithium-Ion battery (green battery)
- The battery icon is solid red when the battery voltage is:
 - less than 3.10V for disposable Lithium battery (white or blue battery)
 - less than 3.40V for rechargeable Lithium-Ion battery (green battery)

WARNING

You must change your battery immediately when the indicator turns red

Lithium batteries sustain high power for a long time, but once the power starts to drop, it does so very fast. A red battery indicator means that the battery power will drop to insufficient power within a few minutes.

Optimizing Battery Life

The battery life is significantly affected by the brightness setting of your display and the display colors you select. Learn more about optimizing your XEN's battery in the section "[Important Information About XEN Batteries](#)".

SURFACE MENUS

1. [Shut Off](#)
2. [Enter PIN](#) (only if you haven't entered it yet)
3. [LOCK / UNLOCK](#) (only if the device has been unlocked)
4. [Dive Log](#)
 - 4.1. [Log Summary](#)
 - 4.2. [Log Detail](#)
 - 4.3. [Depth Graph](#)
 - 4.4. [Temperature Graph](#)
5. [Display Settings](#)
 - 5.1. [Brightness](#)
 - 5.2. [Auto Dim](#)
 - 5.3. [Refresh](#)
 - 5.4. [Layout](#)
 - 5.5. [Velocity](#)
 - 5.6. [Stopwatch DF](#)
 - 5.7. [Dark Mode](#)
 - 5.8. [Analog Clock](#)
 - 5.9. [Show Hours](#)
 - 5.10. [Colors](#)
 - 5.11. [Simulate Dive](#)
6. [Alarms](#)
 - 6.1. [Alarms On / Off](#)
 - 6.2. [Depth](#)
 - 6.3. [Time](#)
 - 6.4. [Ascent rate](#)
 - 6.5. [Descent rate](#)
7. [Preferences](#)
 - 7.1. [Units](#)
 - 7.2. [Log Period](#)
 - 7.3. [Tap Sensitivity](#)
 - 7.4. [Tap Count](#)
 - 7.5. [Minimum Dive](#)
 - 7.6. [Minimum Surface Interval](#)
 - 7.7. [Status](#)
 - 7.8. [Battery Type](#)
 - 7.9. [Battery Meter](#)
 - 7.10. [Battery Test](#)
8. [Salinity](#)
9. [Time/Date](#)
 - 9.1. [12h/24h](#)
 - 9.2. [Time](#)
 - 9.3. [Date](#)
 - 9.4. [Year](#)
 - 9.5. [Calibrate Time](#)
10. [Connect to PC](#)

1. Shut Off

Choosing this menu option will put your XEN in Sleep Mode, which is designed to use minimum battery. The XEN will still wake up when tapped 3/5 times. It will also still keep track of surrounding pressure so it can wake up once you enter the water.

2. Enter PIN

This is where you enter the free PIN you receive upon registering your XEN unit. There is a step-by-step description of the PIN entry process in the [Entering Your Software Activation PIN, Setting Up Time/Date & Battery Type](#) section of the manual. You may be required to re-enter this PIN after a software update, so please keep a written record of it for reference.

3. LOCK / UNLOCK

This menu item allows you to lock all your menu settings so they cannot change accidentally due to random shaking e.g. during a bumpy ride to the dive site or knocking around in your backpack.

To lock, just select the “LOCK” menu item by tapping on the side of your unit. Your XEN is now locked, and the menu item will change to “UNLOCK”

To unlock, just select “UNLOCK” by tapping on the side of your unit. You will have to enter the unlock sequence. It is “123” and you input it in the same way as you input your PIN number (refer to [Entering Your Software Activation PIN, Setting Up Time/Date & Battery Type](#) if you have trouble entering the number). The screen will also remind you how to perform the unlock sequence. The unlock sequence prevents random unlocking of the unit – it is very improbable that random shakes will input that sequence.



When a unit is put in “LOCK” mode, the scrollbar will turn **Red**. Once you unlock, the scrollbar will turn back into green and you can proceed with your use of the XEN.



4. Dive Log

The Dive Log keeps track of dives you did with your XEN, including their depth and temperature profiles. With use of a XEN PC Interface and related software you can download this information to your desktop or laptop (for more information on this, please read the [XEN PC Interface section](#) of the manual). Your XEN is capable of remembering hundreds of dives. Older dives, though, will not have their depth and temperature profiles available.

The number of dives recorded by the Dive Log depends on the Log Period you select. If you set the Log Period to 1 second (1s), there is space for more than 60 hours of dive profiles. This will increase substantially if you increase the Log Period. For example, with the Log Period set to 60 seconds (60s), your XEN would be capable to remember 3600 hours of dives.

To learn how to change the Log Period, refer to the [Log Period](#) section of the manual

4.1. Log Summary

In the Log Summary, you will see two things:

- a menu item called “Page”
- a list of your most recent dives

The “Page” menu item allows you to scroll through your dives page by page. At first, it will be showing “1” and the list of dives below it will be your most recent dives. If you set “Page” to “2”, it will bring up the dives that occurred immediately before that. As you increase the Page number, you will see a list of older and older dives.

The list of dives will display a short summary of each dive, that is, the date and time of the dive. When you scroll down to highlight a particular dive, you will also see its maximum depth and duration at the bottom of the screen. If you select a particular dive, you will enter its Log Detail page.

4.2 Log Detail

In this page, you will see more detailed information on the selected dive. Below is a list of data you will see, in the same order as it will be displayed:

- Dive No. – the number of this dive, numbered in the sequence that it occurred
- Max. Depth
- Avg. Depth – this is average depth of your whole dive, so if you have reset average depth during the dive, it won't affect this number
- Duration – dive time, in hours and minutes
- Date – day of the month, month and year of the dive
- Time – the time of day at which you entered the water
- Min. Temp. – minimum temperature over the whole duration of the dive
- Max. Temp. – maximum temperature over the whole duration of the dive
- Surf. Int. – the surface interval since last dive
- Depth Graph – by choosing this option, you will see depth profile of your dive
- Temp. Graph – by choosing this option, you will see temperature profile

4.3. Depth Graph

The depth graph spans whole width of the screen, with the start of the dive at the left-most part, and the end of dive at the right-most part. The top of the screen represents the surface of the water, and the bottom of the screen represents the maximum depth reached (this number is also printed on the screen). By tapping, you exit back into the “Log Detail” menu.

4.4. Temperature Graph

The temperature graph also spans whole width of the screen, with start of dive at the left-most part, and the end of dive at the right-most part. There are two numbers printed on the screen, one in bottom-left – that is temperature represented at the bottom of the screen, and one in top-left – that is temperature represented at the top of the screen. By tapping, you exit back to the “Log Detail” menu.

5. Display Settings

This is a series of settings you can use to personalize your XEN's display.

5.1. Brightness

The “Brightness” setting has three levels – low, medium and high. The darker the water, the lower brightness you need to see your display clearly. Also, you might find high brightness in the dark water too bright – that is, it could emit too much light, compared to environment you’re diving in. On the other hand, in clear, shallow water, with lots of sunlight, you will need high brightness to see the display properly. Keep in mind that higher brightness burns more battery, so you should select the lowest brightness that meets your needs on a given dive.

5.2. Auto Dim

You can use the “Auto Dim” feature to fine-tune the brightness of your display. If you need high brightness on the surface and lower brightness at depth, you do not need to adjust it manually. Instead, you can set your “Auto Dim” setting to the depth at which you want your display brightness to be reduced to “Low”. By using the “Auto Dim” feature, here is what will happen:

- At the surface, display brightness will be at the setting chosen in the “Brightness” menu
- Once you reach your Auto Dim depth, and below, the brightness will switch to “Low”
- Between these two, the brightness will decrease linearly with depth (e.g., at half of the Auto Dim depth, it will be halfway between the surface brightness setting, and “Low”)

If you set your Brightness setting to “Low”, the Auto Dim feature will have no effect.

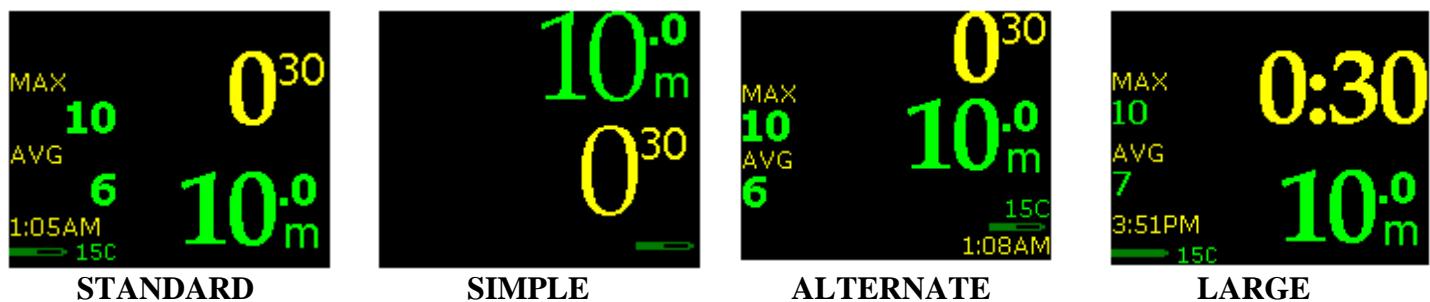
The default Auto Dim setting is “Off”. You can adjust it in 10m / 30ft increments.

5.3. Refresh

You can either set refresh rate to “Fast”, or “Normal”. The default setting is “Normal”. In most cases, you will not notice the refresh rate when set to “Normal”, but if you do, you can set it to “Fast”. Using the “Fast” setting will shorten the battery life.

5.4. Layout

Your XEN comes with a four underwater display layouts to choose from:



5.5. Velocity

This setting changes whether or not ascent/descent rates will be displayed. It will show the rate as a number of meters or feet per minute, and an arrow showing whether you are ascending or descending. Please note that the location of the Velocity value is different depending on the Screen Layout you select.



Velocity: OFF or not ascending/descending



Velocity: ON, ascending at 9 mpm

STANDARD

5.6. Stopwatch DF

This setting lets you control whether the stopwatch will be on at the beginning of a new dive. The default setting is “Off”. This means that if you want to use Stopwatch during your dive, you will need to turn it “ON” first. If you change this setting to “ON”, the default behavior of the Stopwatch will be to turn on at the start of the dive. Once you turn the Stopwatch “ON”, it will remain on for the remainder of the dive (unless you turn it back off). For details refer to [Stopwatch](#) section.

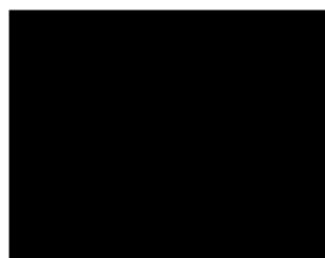
5.7. Dark Mode

This menu item enables a Dark Mode On/Off option in the underwater menu. This option enables selecting one of three low brightness color schemes for the underwater dive screen. The default setting is “None” and the Dark Mode On/Off option is not available in the underwater menu.

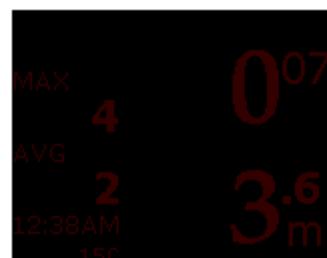
There are three under water dive screen color schemes available for selection:



Dark Mode : Dim
(Data in dim green color)



Dark Mode: Blank
(Nothing is displayed)



Dark Mode: Stlth
(Data in dim red color)

The “Blank” mode was created on the request of cave-diving instructors, who found that the XEN’s screen shone so brightly that it would illuminate the cave during a lights-out drill. The “Blank” mode allows students to turn off the screen on their XEN, without interrupting the unit’s functioning.

The “Stealth” mode, which features all data in a dim red color, is designed for use at night as red has the least impact on the quality of your night vision.

The “Dim” mode, which features all data in a dim green color, can also be used at night to preserve your night vision, or as an ultra-battery-savings measure in low-light conditions.

5.8. Analog Clock

This setting affects how the seconds portion of your dive time is displayed. By selecting “Off”, you will have the seconds value printed as a number on your display. By selecting “On”, you will see a graphical indication of the seconds elapsed: a bar display filling up over time to a full minute.



Analog Clock: OFF



Analog Clock: ON

STANDARD

5.9. Show Hours

This setting affects how your total dive time will be displayed. By selecting “Off”, you will have the dive time shown as minutes:seconds, with the minutes value exceeding 60 once more than an hour has elapsed. By selecting “On”, you will have the dive time show as hours:minutes:seconds, with the minutes value only reaching 59 before being converted into 1 hour and 0 minutes.



Show Hours: OFF



Show Hours: ON

STANDARD

5.10. Colors

Choosing this option will take you to entire sub-menu, where you can choose colors for different parts of your display. You can set the colors of the following values:

- Depth
- Total dive time
- Stopwatch
- Maximum depth
- Maximum depth label (“MAX” printed on the screen)
- Average depth
- Average depth label (“AVG” printed on the screen)
- Time of day
- Temperature
- Depth units
- Menu text
- Menu parameters

Scroll down to the value you wish to change by tapping “Down”. Tap “Left” to move the cursor over to the color indicator for that value. You can then scroll through all available colors by tapping “Up” or “Down”. Once you reach a color that you like, you can tap “Right” to return to the list of values. Once you have completed all the changes you wish to make, scroll all the way down until you reach “Exit”.

To reset the colors to the factory settings, place your cursor on “All Colors”. Tap “Right” once to confirm, then tap “Down” twice to place your cursor on “Factory Default”. Tap “Right” to confirm that you want to rest the colors to the factory settings.



5.11. Simulate Dive

The final item in the “Display” menu is “Simulate Dive”. This is so you can test all your display settings, without getting yourself or your XEN wet. When you enter “Simulation”, it will open sub-menu asking you for depth and time of the dive, its speed (whether it’s normal – 1x, or faster – 2x, 4x, etc., up to 16x faster than normal), and then you can select “Start”.

A couple of things to note about the XEN simulator:

- The simulator follows descent and ascent rate limits
- It takes a moment to turn on, since the dive starts at 0m/ft but the XEN turns on at 1.6 m / 5.25 ft
- If the time you set is too short to reach the specified depth, the simulator will just keep descending for the allotted time, and then start ascending without reaching the depth you specified
- Don’t be surprised, if after long and deep simulated dive, the XEN simulates a straight ascent to the surface – this device is a bottom timer, it does not calculate decompression
- Please note that the Auto Dim option is not available during a simulation

You can stop the simulation at any time by tapping the unit 3/5 times to enter the underwater menus, and choosing “Stop Simulation” (to learn more, refer to the [“Stop Simulation”](#) section of the manual.)

6. Alarms

Your XEN can display visual alarms when you exceed any of the following parameters:

- Maximum depth
- Maximum dive time
- Maximum ascent rate
- Maximum descent rate



When the alarm is activated for any parameter, that piece of information will start blinking on your screen for one minute. If you do not correct the situation within one minute, the parameter display will invert (i.e. it will appear as black letters on colored background) until you correct the situation causing the alarm. Once you correct the situation, the alarm will turn off

The only exception is a time alarm. It will blink for 1 minute, then go back to normal. The reason for this is that you cannot correct the fact that you exceeded your maximum time.

6.1. Alarms On / Off

The default setting for Alarms is “On”. Selecting “Off” allows you to turn all the alarms off entirely. If you select “Off”, even if some alarm limits are exceeded, you will not see ANY alarm. The use of this option is discouraged.

6.2. Depth

Here you can set the depth at which you want your Depth alarm to activate.

6.3. Time

Here you can set the time during your dive, when you would like the Time alarm to activate. One of the uses for this feature could be to remind you that your maximum bottom time has been reached.

6.4. Ascent Rate

Here you can create a set of ascent rate rules. You can set up to 5 different rules.

The first rule is the one with “Start” on the left. This will apply at all depths of your dive, unless you set additional rules. This will also be the default rule for any depths not covered by other rules. If, for example, you set it to 10 meters per minute / 33 feet per minute, and set no other rule, then at any depth, exceeding this ascent rate will cause an alarm.

Alternatively, you can add more rules, in the format “Start Depth” - “Maximum Rate”. These additional rules will apply once you get **shallower** than specified depth. For example, you might choose to limit yourself to 1 meter per minute / 3 feet per minute once you're past your last deco stop, which is planned at a depth of 3 meters / 10 feet. In this case, you would set a rule “Start Depth: 3 metres” and “Maximum Rate: 1 meter per minute”.



6.5. Descent Rate

This menu works in the same manner as the previous menu – the Ascent Rate menu. In this case, though, a rule is in effect once you're **deeper** than your specified start depth, and first rule will apply from surface downward, until you reach your next rule's start depth.

7. Preferences

In this menu, you are able to adjust and fine-tune settings of your device. You are probably going to use this menu only once, before you start diving with your XEN.

7.1. Units

Here, you can choose the units in which data will be displayed on your XEN:

- Metric units: meters, meters per minute, Celsius
- Imperial units: feet, feet per minute, Fahrenheit

7.2. Log Period

The Log Period is the frequency with which dive data will be saved to memory. Your XEN collects depth and temperature data for each dive. If you chose a Log Period of 2 seconds, then your XEN will store depth and temperature data to memory every 2 seconds.

The number of dives recorded by the XEN's Dive Log depends on the Log Period you select. If you set the Log Period to 1 second (1s), there is space for more than 60 hours of dive profiles. This will increase substantially if you increase the Log Period. For example, with the Log Period set to 60 seconds (60s), your XEN would be capable of remembering 3600 hours of dive time.

7.3. Tap Sensitivity

You can set Tap Sensitivity to "Low" or "High". This allows you to adjust how softly or firmly you must tap your XEN for it to react. "High" sensitivity means it will be very sensitive and react to light taps. "Low" sensitivity means it will be less sensitive and react to stronger taps only.

Some divers like to set their Tap Sensitivity to "Low" when in caves or wrecks to prevent accidental bumps on the surrounding rock or wreck to launch their unit into menu mode.

7.4. Tap Count

You can set this either to "3" or to "5". By choosing either of these, you set the number of taps that will wake up your XEN from Sleep Mode, and the number of taps that will take you to the menus.

The default setting is "3". Some divers find that the XEN can wake up at random due to a bumpy ride to a dive site or due to accidental impacts during a dive in a closed environment, for example. In those cases, we recommend changing the setting to "5".

7.5. Minimum Dive

This allows you to control the minimum dive time required for the dive to be classified as dive. For example, if you set it to 1 minute, then any dive shorter than that will not be logged. You can control this number in increments of 10 seconds. Minimum value is 0, maximum – 600 seconds.

7.6. Minimum Surface Interval

This allows you to control the minimum time of surface interval before next dive is classified as new dive. If you stay on the surface for shorter time than the specified interval, your next descent will still be considered a part of the previous dive, and both descents will be logged as one dive. You can control this value in increments of 1 minute. Minimum value is 0, maximum – 30 minutes.

7.7. Status

If you tap into this menu setting, you will see basic information concerning your device, such as type, hardware version, software version, etc.



7.8 Battery Type

The type or capacity of the battery is needed to accurately estimate the remaining dive time. There are three battery types available:

- White-ER14335M (Disposable Lithium Battery)
- Blue-ER17335M (High Capacity Disposable Lithium Battery)
- White with green text-LFP-123A (Rechargeable Lithium-Iron-Phosphate Battery)

You can find more information about the different battery types in the section [Important Information About XEN Batteries](#).

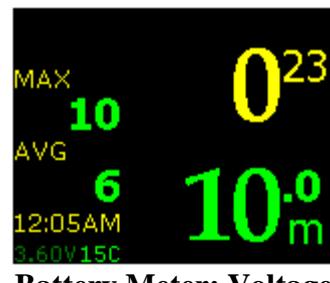
7.9 Battery Meter

This menu item allows you to select battery meter style either in battery symbol graphic or in battery voltage value. The default setting is “Symbol”.

Screen Layout: STANDARD



Battery Meter: Symbol



Battery Meter: Voltage

7.10 Battery Test

This menu item runs the battery test for the selected battery type and displays the estimated remaining dive time. This test will take approximately 1 minute. During the battery test, you will see the screen light up progressively with white pixels, to provide a battery reading when the unit is at maximum battery consumption.

8. Salinity

You can adjust salinity settings here. There are three available modes:

- fresh (1 kg / l, such as freshwater lake or river)
- brackish (1.012 kg / l, such as some estuaries, inland seas, etc.)
- saline (1.025 kg / l, such as open sea)

By selecting the correct salinity, you ensure that your displayed depth will be accurate. Your XEN, like any other depth gauge or computer, actually measures pressure. Depending on water salinity, there will be a slight variation in pressure at the same depth.

If you are unsure of the water salinity, choose the salinity that your dive / decompression tables were calibrated to.

9. Time/Date

In this submenu, you can set all the options connected with time and date.

9.1 12h/24h

Choose the one you prefer – the AM/PM type time format, or the 24-hour format.

9.2 Time

Time of day, in hours and minutes.

9.3 Date

Day and month.

9.4 Year

And, finally – current year. The year should be within period of 2010 to 2025.

9.5 Calibrate Time

The Liquivision XEN uses a silicon oscillator to keep time. Silicon oscillators are far more reliable than quartz crystals, and are used by NASA in outer space. However, they can have a “drift” that can cause your unit to gain or lose time at a predictable rate. Should your XEN be noticeably gaining or losing time, you can follow our Time Calibration Procedure to correct for your unit’s drift.

To perform this procedure, you will need access to the internet and have 48 hours during which you do not need to dive your XEN. Then, take the following steps:

1. Check that there is no pre-existing time adjustment set up on your unit:

- a) Make sure your XEN is at room temperature and has a working battery in it.
- b) Enter the “Calibrate Time” menu.
- c) Make sure that the 'Daily' value is 0m00s (if not, set it to zero)
- d) Exit that menu, and then exit the main menu

2. Match your XEN’s time to the time provided by the Greenwich Mean Time website:

- a) On your PC or MAC, go on the internet and visit <http://www.wwp.greenwichmeantime.com/>
- b) Select your time zone
- c) Make sure that the website is now showing the correct time of day for your area
- d) On your XEN, enter the “Ready to Dive” screen and note the time of day in the lower-left
- e) Then, go to the “Time/Date” menu. Set the hours and minutes to the current time displayed on the website, plus one minute (if the website displays 11:45:21PM, set your XEN to 11:46PM)
- f) Move the cursor to the “Exit” item on the menu but DO NOT SELECT IT. The time of day will not be ‘set’ in your XEN until you select “Exit” with a left or right tap
- g) Watch the website time. At the moment that it hits the next minute (i.e. 11:46:00PM), then tap your XEN with a left or right tap to select “Exit”
- h) Return to the “Ready to Dive” screen and observe the time of day in the lower left corner of your XEN, and compare it to the time of day on the website. When the time crosses the next minute on the website, make sure your XEN crosses that minute virtually simultaneously.
- i) If they are not synchronized to within 1 second, then go back to step (2d) and repeat steps (2d-h) until your XEN is exactly synchronized with the time provided by the website.

3. After 48 hours have passed, compare your XEN’s time to the website once again:

- a) On your PC or MAC, go on the internet and visit <http://www.wwp.greenwichmeantime.com/>, select your time zone, and make sure that the website is showing the correct time of day
- b) On your XEN, enter the “Ready to Dive” screen and note the time of day in the lower-left

- c) Focus on the time displayed on your XEN. When the minute 'flips', immediately observe the website time and record it. For example, your XEN flips to 11:24pm, and at that exact moment the website time shows 11:26:18pm.
 - d) In this example, your XEN is slow by 2 minutes, 18 seconds over 48 hours. We need the error over 24 hours, so we divide by two, yielding 1 minute, 9 seconds slow per day.
4. Finally, enter the correct time calibration into your XEN

- Go to the “Calibrate Time” menu
- Enter the correction +1m09s by tapping UPWARDS to speed your XEN clock up.
- You can also slow your XEN down by tapping DOWNWARDS and setting a negative correction, e.g. -1m09s.



10. Connect to PC

Tap into this menu item before starting the download of your dive logs in your PC application of choice. Refer to its manual for more information.

If you tap into this item accidentally, don't worry – the wait for PC communication will time out after 30 seconds, and you will be back to main menu.

For more information on connecting to your PC, downloading your dives or uploading new software onto your XEN, please refer to the "[XEN PC Interface](#)" section of the manual.

UNDERWATER MENUS

Main Underwater Menu

- 1 [Silence Alarms](#) (only when Alarms are “On” in Surface Menus AND triggered underwater)
- 2 [Stopwatch](#)
- 3 [Reset AVG](#)
- 4 [Dark Mode On/Off](#) (only available if Dark Mode is activated in the Surface Menus)
- 5 [Display](#)
 - 5.1 [Brightness](#)
 - 5.2 [Auto Dim](#) (only available if Auto Dim is activated in the Surface Menus)
 - 5.3 [Layout](#)
- 6 [Stop Simulation](#) (only if it is a simulated dive, not a real dive)

NOTE: We do recognize that some of our customers will be using the Stopwatch function a lot. Therefore, we have decided to create a shortcut for you: if the Stopwatch is “On”, then by tapping three/five times on a side of your XEN, you will be taken directly to the stopwatch sub-menu (refer to [Stopwatch](#) section for more details)

1. Silence Alarms (only when Alarms are “On” in Surface Menus AND triggered underwater)

If an alarm is annoying you, *and you are confident that you should continue the decompression violation that is causing the alarm*, you can switch that alarm off. Choosing the “Silence Alarms” option will cause ALL of the alarms that are on at that moment to be silenced until the end of the dive.

Alarms you can silence are:

- Depth alarm
- Time alarm
- Ascent/Descent Rate alarm

Other alarms, i.e. deco ceiling alarm and gas-related alarms cannot be silenced.

For example, if you have exceeded your maximum depth and time alarm settings, both of these alarms will be on. If you choose to “Silence Alarms”, you will turn both of these alarms off and neither of them will be displayed on this dive anymore – no matter what depth you go to or how long you stay there for. However, if you exceed your maximum ascent rate on the same dive, it will still cause an alarm.

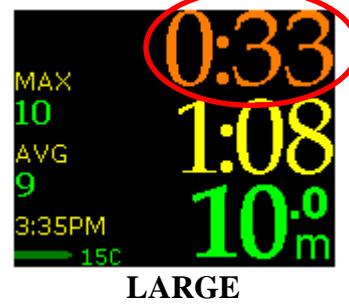
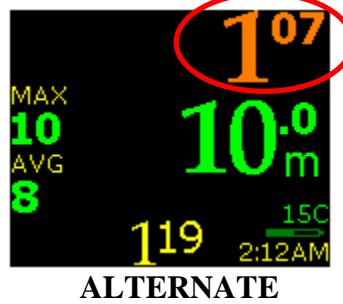
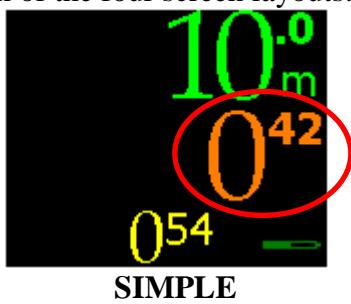
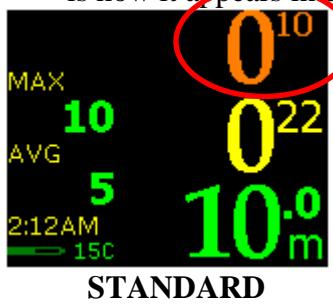
Keep in mind that the descent and ascent rate alarms are the same alarm – if you silence the descent rate alarm on the way down, you will not see alarm go off if you ascend too fast on the way up!

WARNING

Use of the “Silence Alarms” is intended for exceptional circumstances. Ignoring an alarm you have chosen to set means you are exceeding the limits of your dive plan and putting yourself at a very serious risk.

2. Stopwatch

The “Stopwatch” is a timer that you can turn on and off, start, pause, and restart during your dive. Here is how it appears in each of the four screen layouts:



If the Stopwatch is “Off”, your XEN’s underwater menu has an item called “Stopwatch On”. If you select this item by tapping either side of your XEN unit, you will activate the Stopwatch function and you will see your dive display rearrange itself – it will show the Stopwatch in addition to the information it was previously displaying.

When the Stopwatch function is “On” and you return to the underwater menus, you will see a menu item called “Stopwatch”, and this takes you to the submenus that control the use of the stopwatch.

Stopwatch Shortcut: if the Stopwatch is “On”, then by tapping three/five times on a side of your XEN, you will be taken directly to the stopwatch sub-menu:

- Stop / Start: depending on whether the Stopwatch is running or paused at the moment, this will either say “Stop” or “Start”. Choosing “Stop” will pause the stopwatch if it is running, and “Start” will re-start the stopwatch, if it is paused. Initially, when you turn the Stopwatch on for the first time during your dive, it is paused.
- Reset: this will set your Stopwatch count to 0. If the Stopwatch is running, it will keep running – now, counting again from 0.
- Off: this will pause the Stopwatch and turn it off. The dive display will return back to normal. If you turn your stopwatch back on later, it will have same count as when you turned it off.

Bear in mind, that to make it easier for you to operate the stopwatch, the items in the stopwatch submenu change order:

- If the stopwatch is running, first item is "Reset", and second item is "Stop".
- If the stopwatch is not running, first item is "Start", and second item is "Start".

3. Reset AVG

This option will reset the average depth that has been calculated from the beginning of the dive, and it start calculating it from this point onwards. Keep in mind, however, that the average depth in your dive log will be average depth over the whole dive.

4. Dark Mode On/Off (only available if Dark Mode is activated in the Surface Menus)

This underwater option turns on or off the low brightness color scheme you have pre-selected during your surface dive preparation (please refer to the “[Dark Mode](#)” section of the manual for more information).

Once you turn Dark Mode “On”, depending on the color scheme you selected on the surface, your screen will either go blank, or will show all data in dim red or dim green. To exit Dark Mode, tap the unit three or five times. This will take you into the underwater menu that will allow you to turn Dark Mode “Off”.

5. Display

You can adjust a limited set of display features underwater.

5.1. Brightness

The “Brightness” setting has three levels – low, medium and high. The darker the water, the lower brightness you need to see your display clearly. Also, you might find high brightness in the dark water too bright – that is, it could be too much light, compared to environment you're diving in. On the other hand, in clear, shallow water, with lots of sunlight, you will need high brightness to see the display properly. Keep in mind that higher brightness burns more battery, so you should select the lowest brightness that meets your needs on a given dive.

5.2. Auto Dim (only available if Auto Dim is activated in the Surface Menus)

This underwater option turns on or off the Auto Dim feature you have pre-selected during your surface dive preparation (please refer to the “[Display Settings - Auto Dim](#)” section of the manual for more information).

You can use the “Auto Dim” feature to fine-tune the brightness of your display. If you need high brightness on the surface and lower brightness at depth, you do not need to adjust it manually. Instead, you can set your “Auto Dim” setting to the depth at which you want your display brightness to be reduced to “Low”. By using the “Auto Dim” feature, here’s what will happen:

- At the surface, display brightness will be at the setting chosen in the “Brightness” menu
- Once you reach your Auto Dim depth, and below, the brightness will switch to “Low”
- Between these two, the brightness will decrease linearly with depth (e.g., at half of the Auto Dim depth, it will be halfway between the surface brightness setting, and “Low”)

If you set your Brightness setting to “Low”, the Auto Dim feature will have no effect.

The default Auto Dim setting is “Off”. You can adjust it in 10m / 30ft increments.

5.3. Layout

Your XEN comes with a four underwater display layouts to choose from: Standard, Simple, Alternate, and Large. You can see screenshots of each layout in the [Display Settings - Layout](#) section of the manual.

6. Stop Simulation

This option is displayed only if you are “underwater” in a simulated dive (to learn more about dive simulation, please refer to the “[Simulate Dive](#)” section of the manual). In such a case, choosing this will immediately stop simulation, and return back to the surface menus.

DIVING WITH YOUR XEN

Entering the water

Dive Planning

WARNING

Your XEN is a bottom timer – it calculates the duration of your dive, its depth, and other simple parameters. It does not make any decompression calculations, nor does it provide any decompression information. You will need to use other means (tables, desktop decompression planners, dive computers, etc.) to plan your dive.

Never attempt to plan a decompression dive without a proper training.

Although your XEN does not provide any decompression information, it will be a great tool in assisting you to execute a pre-planned dive.

Turning Your XEN On

We recommend that you switch your XEN on yourself before you enter the water to check the remaining battery power and to make sure that all is functioning properly. You can turn it on by tapping the unit in the “Down” direction three/five times.

Otherwise, it will turn on automatically few seconds after you take it deeper than 1.6 meters / 5.25 feet.

Beginning Your Dive

When you start to descend and go below 1.6 meters / 5.25 feet, your XEN will turn into dive mode.

Diving

Dive Display

You have four different underwater display layouts to choose from: Standard, Simple, Alternate, and Large. The display layouts menu can be accessed both in surface mode and in dive mode. For more information, please refer to the Surface Menus “[Display Settings - Layout](#)” and Underwater Menus “[Display - Layout](#)” sections of the manual. In addition, you can customize the color of each piece of information on your display. This can only be done on the surface. Please refer to the “[Display Settings - Colors](#)” section of the manual.

STANDARD**SIMPLE****ALTERNATE****LARGE**Dive Time

One of large numbers on your display is the dive time – its location depends on the display setting you have chosen. Please refer to the screenshots above to locate the time value for each display setting.

Dive time is measured in seconds, starting from the moment your XEN reaches 1.6 meters / 5.25 feet. It will stop once you surface, and it will reset once you have been on the surface for more than 5 minutes.

Dive time can be displayed in several ways:

The minutes of your dive can be displayed as follows (refer to the “[Show Hours](#)” section for details):

- minutes:seconds, e.g. 135:00
- hours:minutes:seconds, e.g. 2:15:00

The seconds of your dive can be displayed as follows (refer to the “[Analog Clock](#)” section for details):

- as a number, e.g. 135:00
- a graphical indication of the seconds elapsed: a bar display filling up to a full minute

Depth

Another one of the large number on the display is your current depth – its location depends on the display setting you have chosen. Please refer to the screenshots above to locate the depth value for each display setting.

If you chose metric units, you will see depth in meters, and one decimal place in smaller font. If you chose imperial units, you will see depth in feet, and no decimal places.

Please refer to the “[Units](#)” section of the manual for details.

Stopwatch

As you begin your dive and your XEN goes into dive mode, the stopwatch will be off. You can activate the stopwatch during your dive by tapping into menu mode and selecting “Stopwatch On”. Turning the stopwatch on will cause the time display to shrink and move, and the stopwatch will take its place.



Stopwatch: OFF



Stopwatch: ON

STANDARD

During your dive, you can:

- Turn the stopwatch on and off (that is, display it on your screen, or remove it)
- Start and pause the stopwatch
- Reset the stopwatch

Please refer to the “[Stopwatch](#)” section of the manual for details.

The stopwatch format will match the dive time format you have previously selected, either: total minutes elapsed, or hours:minutes elapsed. Please refer to the “[Show Hours](#)” section of the manual for details.

However, the seconds value in the stopwatch is always displayed as a number, in a smaller font. It is never displayed graphically, regardless of the setting you have selected for dive time seconds display.

Maximum Depth

The label “MAX” refers to the maximum depth you have reached over your entire dive. It is displayed as a single number, without decimal places.

It is displayed either in meters or in feet, depending on your Units setting (refer to the “[Units](#)” section of the manual for details).

Your maximum depth will reset if you surface for more than 5 minutes.

Average Depth

The label “AVG” refers to the average depth you have reached over your entire dive. The average depth count starts at the beginning of the dive.

You can reset your average depth once you reach the bottom by tapping into the underwater menus and selecting “Reset AVG” (refer to the “[Reset AVG](#)” section of the manual for details). In that case, average depth displayed here will be average depth since the last reset. It is displayed as a single number, without decimal places.

It is displayed either in meters or in feet, depending on your Units setting (refer to the “[Units](#)” section of the manual for details).

Your Average Depth will reset if you surface for more than 5 minutes.

Please note that the Average Depth that is saved in the Dive Log is not affected by the reset option – it is average depth over the whole dive.

Time of day

The time of day is displayed in hours and minutes. You can choose whether you want to have it displayed as a 12-hours (AM/PM) format, or 24-hours (refer to the “[Time/Date](#)” section of the manual for details).

Temperature

This is current temperature of surrounding environment.

It is displayed either in Celsius or in Fahrenheit, depending on your Units setting (refer to the “[Units](#)” section of the manual for details). You will see a “C” or “F” letter next to the temperature value to let you know which units you have selected.

Keep in mind that the temperature sensor is inside the XEN unit, so it may take a moment for it to adjust to a rapid external temperature change.

Battery Indicator

The battery status is represented graphically with a battery icon or with a battery voltage value.

- The battery icon is solid green when the battery voltage is:
 - more than 3.30V for disposable Lithium battery
 - more than 3.50V for rechargeable Lithium-Ion battery
- The battery icon is solid yellow when there is:
 - less than 3.30V for disposable Lithium battery
 - less than 3.50V for rechargeable Lithium-Ion battery
- The battery icon is solid red when there is:
 - less than 3.10V for disposable Lithium battery
 - less than 3.40V for rechargeable Lithium-Ion battery



WARNING**You must change your battery immediately when the indicator turns red**

Lithium batteries sustain high power for a long time, but once the power starts to drop, it does so very fast. A red battery indicator means that the battery power will drop to insufficient power within a few minutes.

Learn more about your XEN's battery in the section "[Important Information About XEN Batteries](#)".

“Battery Savings” Mode

In the event that your battery is very low during the dive, your XEN will go into “Battery Savings” mode. It is a mode that tries to preserve the battery as much as possible, so that the XEN keeps functioning as long as possible. This mode changes the following things:

- all the information on the display will turn green (the color that is most power-economical)
- the display brightness will be set to low

For more details, please refer to [Battery Savings Mode: When Your Battery Voltage Drops Below A Critical Level](#).

Exiting the water

Once you are shallower than 0.6 meters / 2 feet, your XEN will go back into surface mode and offer you access to surface menus.

However, for next few minutes, it will remain in post-dive mode. You can control length of this period, in menu setting [Minimum Dive](#). This means that if you resume your dive within that period, it will be counted as continuation of previous dive, instead of a new one. This also means, that all the numbers, such as maximum depth, average depth, dive time, etc. will not be reset.

After that, if you decide to dive again, it will be counted as a new dive.

Last dive information

When on the surface, and not in Sleep Mode, your XEN will display information about the last dive that you have done.

Surface interval – it is time elapsed since your last dive. If it is less than 24 hours, you will see the number of hours and minutes. If it is more than 24 hours, you will see number of days and hours. If it is more than 10 days ago, you will not see any surface interval.

Last depth – is the maximum depth of your last dive, with one decimal place. Depending on your unit settings, it will be either in meters, or in feet, and you will see “m” or “ft” printed after the number.

Last time – is the total time of the last dive, displayed according to your dive time settings – either as total number of minutes, or as hours:minutes.

Altitude Compensation/Surface Pressure Adjustments

The XEN does not have a water sensor that can sense whether it is in the water based on “wetness”.

Instead, your XEN continuously tracks atmospheric pressure to determine the surface pressure at the start of your dive. When it senses a sudden change in ambient pressure, it understands that you have entered the water and that a dive is beginning.

Your XEN can generally distinguish between a sudden change in pressure caused by water entry, vs. other types of sudden changes in pressure, such as a plane taking off, or driving up a mountain.

This method of surface pressure detection has proven quite reliable, but it is always possible to trick your XEN, for example:

- if you place your XEN in shallow and very stable body of water (such as a bucket full of dive gear being rinsed), your XEN may assume that current surface pressure is more than it is in reality. If you go diving immediately after this, your depth reading may be distorted.
- if you increase ambient pressure very quickly after the XEN has adjusted for being at altitude (e.g. if you were to skydive with a XEN), it might go into a phantom dive, as it will assume that you have entered the water. In this highly unlikely case, the only solution is to reset your XEN by removing the battery (please refer to the [Changing The XEN's Battery](#) section for details).

You can always check what XEN assumes as the current surface pressure by going to the “Status” screen (please refer to [Status](#) section for details).

CARING FOR YOUR XEN

The XEN is designed to be a robust device. However, it is still possible to damage it, or to shorten its life by improper use. Please follow these steps to care properly for your unit.

Protecting your XEN casing and screen from scratches

The XEN casing is made from a robust plastic, designed to protect the internal electronics. This plastic is not fully scratch resistant. We strongly recommend the BestSkinEver (BSE) adhesive protector (http://liquivision.com/extras_enlightened_protector.php), which is designed to cover the entire casing of the XEN as well as the screen, to protect them from scratches.

Post-Dive Care and Storage

You should turn off your XEN once you have completed your dive. It will eventually turn off on its own, but you will conserve battery power by turning it off once you are done using it.

You should rinse your XEN in clear (non-salty) water after use, to prevent the accumulation of dried salt in the infrared apertures that communicate with the PC Interface and in the pressure sensor aperture.

You should then wipe your XEN dry and store it in a dry place.

Long-Term XEN Storage

If you are planning to store your unit for more than 1 month, you should remove the battery. This will only cause you to lose time of day and date information. All other settings and dive logs will remain.

We do not recommend removing your battery for shorter storage periods. Every time you open and close the battery compartment, there is a small risk of doing so improperly, opening the possibility of flooding the battery compartment.

Replacement Battery Storage

You should generally have at least one spare battery on hand, to make sure you have the possibility of changing your battery should the situation require you to do so.

Spare batteries should be stored in a cool, dry place, away from direct sunlight.

Service information

While we feel confident of the ongoing accuracy, European (CE) regulations require the unit to be periodically checked for the accuracy of its depth and time readings.

You may contact your dealer regarding testing every 5 years.

IMPORTANT INFORMATION ABOUT XEN BATTERIES

XEN Battery Type

There are several battery options available for your XEN

Disposable Batteries:

- White wrapper (with blue text) ER14335M (compatible with BLACK battery holders ONLY, units #0-1250)



- Blue wrapper ER17335M (compatible with WHITE battery holders ONLY, units #1250 and up, and with units that have their battery holders upgraded from BLACK to WHITE)

NOTE: ER17335M offers about DOUBLE the battery life vs. the ER14335M



WARNING: DO NOT PLACE DISPOSABLE BATTERIES IN THE RECHARGEABLE BATTERY CHARGER. THIS CAN CAUSE THE BATTERY TO EXPLODE.

Rechargeable Batteries:

- White wrapper (with green text) LFP 123A 3.2V (K2 Energy) (compatible with WHITE battery holders ONLY, units #1250 and up, and with units that have their battery holders upgraded from BLACK to WHITE).



These rechargeable batteries can ONLY use this white battery charger that is compatible with the LFP (Lithium Iron Phosphate) battery chemistry.



DO NOT use the old, black battery charger that was compatible with the Green ICR15340 batteries. Those batteries were Lithium Ion (Cobalt) and used a Lithium Ion (Cobalt) charger. This black charger will not charge your LFP batteries properly and **may damage them**.

- **(DISCONTINUED)** *Silver wrapper (with green text) LiFePO4 3.2V (Tenergy) (compatible with WHITE battery holders ONLY, units #1250 and up, and with units that have had their battery holders upgraded from BLACK to WHITE).*



- **(DISCONTINUED)** *Green wrapper ICR16340 3.7V (compatible with WHITE battery holders ONLY, units #1250 and up, and with units that have had their battery holders upgraded from BLACK to WHITE).*



- **(DISCONTINUED April 2013)** *Black charger for Green ICR16340 batteries. This is a Lithium Ion (Cobalt) charger that is compatible with Lithium Ion (Cobalt) batteries like the Green ICR 16340. It is NOT compatible with the new LFP batteries!*



WARNING**THESE BATTERIES ARE THE ONLY AUTHORIZED BATTERIES**

Please note that only ER14335M, ER17335M, LFP123A, LiFeP04 and ICR16340 batteries are authorized for use with your XEN. **ER14335 or ER17335 batteries (no M) are NOT compatible.**

Only the batteries contained in Liquivision battery packs can be guaranteed to perform to Liquivision standards. Use of other batteries could lead to inaccurate battery meter readings, and if the battery reading is not accurate, you could be diving your XEN on an empty battery without knowing it. This could lead your XEN to turn off unexpectedly leading to a loss of critical dive information.

As of April 1st, 2013, ICR16340 and LiFeP04 (Tenergy) batteries are no longer being sold in battery packs. They have been replaced by the LFP123A (K2) batteries.

Be safe! Use Only Approved Batteries!

Set Your XEN To the Correct Battery Type To Get Accurate Battery Meter Reading!

We strongly recommend always having a spare battery on hand, since spare batteries have a long shelf life and do not require any special storage environment (just dry and away from direct sunlight or heat).

Spare batteries are sold as follows:

- **Disposable Battery 1-Pack**
 - 1 disposable battery (ER14335M or ER17335M)
 - 1 spare O-ring
- **Disposable Battery 3-Pack**
 - 3 disposable batteries (ER14335M or ER17335M)
 - 3 spare O-rings
 - 1 reseal-able tube of O-ring lubricant
- **Charger Kit**
 - Charger
 - AC Adapter with international plug adapters
 - 2 rechargeable batteries (LFP123A)
 - 5 spare O-rings
 - 1 reseal-able tube of O-ring lubricant
- **Rechargeable Battery 2-Pack**
 - 2 rechargeable batteries (LFP123A)
 - 5 spare O-rings
 - 1 reseal-able tube of O-ring lubricant

XEN O-rings

You should inspect your battery cap O-ring with every battery change. Check for cracking, damage or dirt. If you choose to replace your O-ring, always make sure to clean the battery cap properly to remove any residue that may prevent a good seal and to lubricate the new O-ring with silicone O-ring lubricant. Only O-rings contained in Liquivision battery packs can be guaranteed to perform to Liquivision standards.

To order spare batteries and O-rings for your XEN, please contact your local Liquivision dealer.

WARNING

Attention, LYNX T1 Transmitter owners:

Please note that the O-rings that were provided with the XEN, XEO, and KAON before June 1st 2013 are NOT compatible with LYNX T1Transmitters.

For more information about O-ring compatibility, please consult:

http://www.liquivision.com/docs/Lynx_User_Manual.pdf

How To Determine XEN Battery Life Remaining

The ER14335M XEN batteries can provide up to 46 hours of dive time with your unit while ER17335M batteries can provide up to 90 hours of dive time with your unit (low brightness, green font, battery used within a month of initial use), although 20-30 hours for the ER14335M batteries and 40-60 hours with the ER17335M batteries is more typical if you use the standard Liquivision color scheme on medium brightness and all the dives are done within a month of first using the battery.

The rechargeable LFP123A batteries usually provide 14-18 hours of dive time and can be recharged up to 1,000 times.

Battery life is shown by the battery indicator on your XEN.

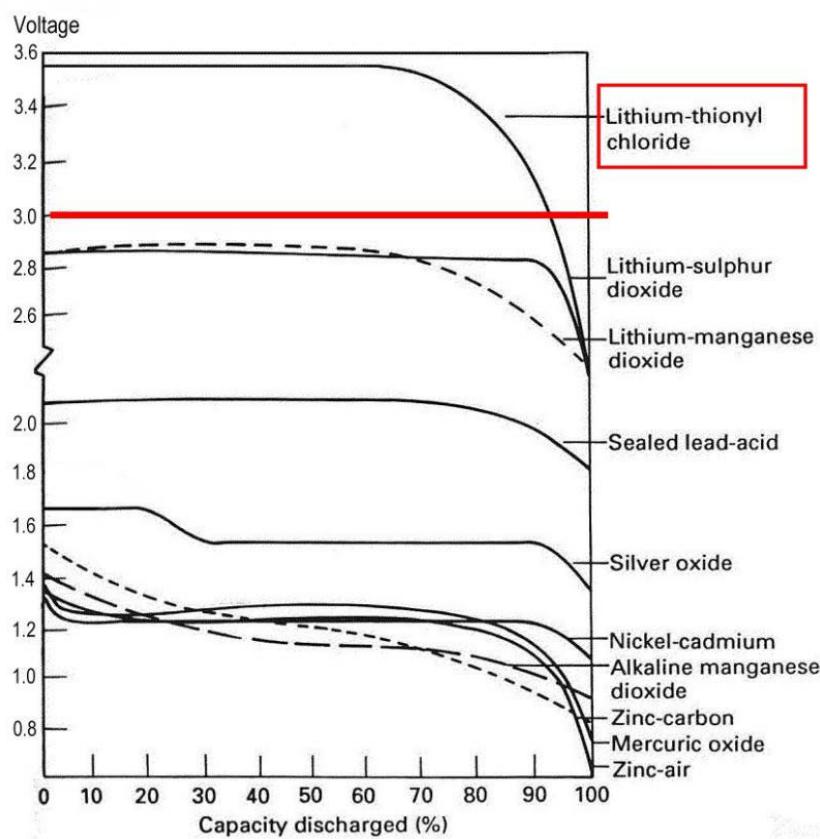
- A **Green** battery icon means that you have enough battery power to complete a normal 2 hour dive. The safest way to perform a long dive (5+ hours) is to insert a fresh battery prior to the start of your dive.
- If the battery icon is **Yellow on the surface**, you should change your battery before beginning your next dive.
- If the battery icon is **Yellow underwater**, you likely have enough battery life to complete your dive.
- If the battery icon is **Red on the surface**, you MUST change your battery immediately.
- If the battery icon is **Red underwater**, you should stop your dive and begin your ascent immediately, while still following proper ascent protocols (respect the ascent speed and Safety Stop).

You should always check the battery life remaining on the surface, prior to beginning your dive, by briefly entering simulator mode with your unit. Your XEN uses more power in dive mode than in surface mode. It may show a green indicator in surface mode, but a yellow one in dive mode, and you can check this by starting a dive simulation.

WARNING**You must change your battery immediately when the indicator turns red**

Lithium batteries sustain high power for a long time, but once the power starts to drop, it does so very fast. A red battery indicator means that the battery power will drop to insufficient power within a few minutes.

The discharge curve of lithium-thionyl-chloride batteries is very flat, with a very sudden drop-off, as shown in the graph below.



This means three things:

- *It is hard to estimate level of charge:* The battery shows a steady 3.6V for most of its life - there is no slow battery voltage decrease that can inform your XEN about the amount of power that has been used and the amount of power left.
- *It is hard to estimate the amount of time left.* Even if your XEN knew exactly how much battery power is left, it is still hard for your unit to judge how much dive time is left. Dive time will be greatly affected by user settings such as **screen brightness** and **colors**.
- *Once the battery voltage starts to drop, it drops fast.* Your XEN will stop functioning entirely once the voltage drops below 2.90V. For this reason, it is important to pay attention to the **Yellow** battery indication - it means there is really very little time left.

Basic Rules For Optimizing Battery Life

You can extend/optimize your battery life in several ways:

- Always choose the lowest screen brightness setting you need for your dive. The XEN has an "Auto-Dim" feature, where the unit uses your chosen brightness setting on the surface, and slowly reduces brightness to Low as you descend to a selected depth.
- Keep battery life in mind when setting screen colors. The OLED screen is an RGB screen, which means it has red, green and blue pixels. To display the color green, for example, it only needs to light up one pixel - the green one. To display any other colors, the screen must light up a combination of pixels. To display white, it must light up three pixels, full-force. Therefore, the most economical display colors would be red, green and blue. The least economical display color is white. The standard Liquivision display color scheme is designed to balance readability with economical battery use.

Detailed Rules For Optimizing Battery Life

1. Brightness. Brightness has the biggest effect on battery life. As a general rule, HIGH brightness gives you HALF the battery life compared to MEDIUM brightness. Similarly, MEDIUM gives you HALF the battery life of LOW. This means that LOW brightness gives you FOUR TIMES more battery life than HIGH brightness. The best way to optimize battery life is the "Auto Dim" feature.

2. Colors. Colors have a dramatic impact as well. Primary colors (pure green, pure red, dark blue) consume the least battery power. Compound colors such as yellow, orange, and gray burn more battery power. Compound colors (those that require all three colors), such as light blue and light gray, burn the most battery power. You should use compound colors with caution.

3. Refresh rate. The refresh rate changes how fast information is updated on the screen. It has two settings, "Normal" and "Fast". If you can use Normal and you don't notice anything, that is the best choice. If you use Normal and you find that you can see the screen flickering when you move the unit, then select Fast. Also, if you plan on taking any pictures or video of the XEN, select Fast.

The Fast refresh rate burns about 20% more battery power than Normal. So battery life on "Fast" is reduced by about 20%.

4. Display mode. The display mode (Standard, Alternate, Simple, Large) has a small effect on battery life. Simple burns the least power. Alternate burns 10-15% more than simple. Standard burns 10% more than alternate.

5. Water temperature. Diving in cold water (water temperature below 12°C / 54°F) shortens the life of your battery. We strongly recommend using conservative colors and brightness settings when diving in cold water to maximize your battery life.

Battery Savings Mode: When Your Battery Voltage Drops Below A Critical Level

The XEN circuit requires a minimum voltage in order to measure the depth properly. In certain cases of aggressive brightness, aggressive colors, or extremely cold water, the voltage of the battery may drop below a critical voltage. Below that critical voltage, it is no longer possible to measure depth accurately. If that happens, the XEN will automatically switch into "Battery Savings Mode": all colors will be changed to green, and the brightness will be changed to low. The refresh rate will not be changed.

Battery Savings Mode is an emergency mode designed to raise the voltage of the battery to an acceptable level. The unit will remain with green colors and low brightness until the dive ends. When the next dive starts, your custom colors and brightness will be used. Again if the voltage drops below a critical level, Battery Savings Mode will be entered to raise the battery voltage.

If you find that your unit is repeatedly entering into Battery Savings Mode (all green text), then you are using too aggressive colors or brightness settings. Entry into Battery Savings Mode is more likely if the battery is nearing the end of its life, or if the water is very cold. However, entry into Battery Savings Mode does not necessarily mean the battery is nearing the end of its life. In some cases you could still have 10-20 more hours of dive time remaining, even if you notice a transition into Battery Savings Mode.

Tables Showing Estimated Battery Life Depending On User Settings

The following tables shows the approximate number of dive hours achieved with different settings, assuming the diving is done within one month of changing the battery, in warm water:

*Table 1 (Default yellow/green colors, Standard Display Layout, diving over 1 month)
ER14335M Battery / ER17335M Battery*

	High Brightness	Medium Brightness	Low Brightness
Slow refresh	11h / 23h	23h / 26h	38h / 76h
Fast refresh	10h / 20h	19h / 38h	31h / 63h

*Table 2 (Custom Colors, Standard Display Layout, diving over 1 month)
ER14335M Battery / ER17335M Battery*

	High Brightness	Medium Brightness	Low Brightness
All green, slow refresh	13h / 26h	23h / 47h	41h / 83h
All light blue, fast refresh	6h / 12h	12h / 24h	23h / 47h

As you can see, the dive hours on a battery vary from about 6 hours to 41 hours with an ER14335M battery or from 13 to 83 hours with an ER17335M battery, depending on the settings used. The longest battery life is obtained by using the simple layout, all green colors, slow refresh rate, with the stop watch off.

Please note that storing a battery inside a unit also affects the battery life, as the unit uses power even when it is turned off. If you are not going to use your XEN for one month or more, you should remove the battery during storage.

Table 3 - Battery dive time on default settings if battery is left inside the unit
ER14335M battery / ER17335M battery

Months inside unit	Dive time on default settings
1 month	28h / 60h
2 months	21h / 48h
3 months	14h / 36h
4 months	7h / 24h
5 months	0h / 12h
6 months	0h / 0h

CHANGING THE XEN's BATTERY

Here is a description of the battery change and O-ring change procedure. You can also refer to the short video on correct battery changes provided here: www.liquivision.com/videos.php

1. Make sure your work area is dry and clean.



2. Prepare all your materials:

For keeping XEN & O-ring clean:

- Lint-free cloth
(e.g. cloth for cleaning your eye/sunglasses)
- Glove

For battery change:

- Spare battery
- Coin (to unscrew battery cap)

For O-ring change:

- Spare O-ring
- O-ring lubricant



3. Clean your XEN unit

- Wash off any salt or other residue
- Dry the unit
- Wipe off any dust or lint with a lint-free cloth



4. Unscrew the battery cap with a coin

- Gently turn counter-clockwise

**5. Continue with your fingers****6. Place the battery cap aside, on its back****7. GENTLY pull the battery holder out**

- Use your fingers to grab the little screw sticking out of the battery holder
- GENTLY pull the battery holder out of the casing
- ⚡ Pulling too hard can break the wires!!!

**8. Pull out just enough to access the battery**

- ⚡ DO NOT pull out all the way! It can break the wires!



9. Remove the old battery

- Lift at the front of the battery, away from the spring



10. Insert new battery

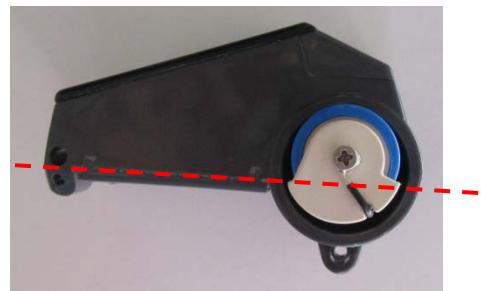
- Flat end against the spring in the back
- “Bumpy” end in the front



11. Slide battery holder back in CORRECTLY

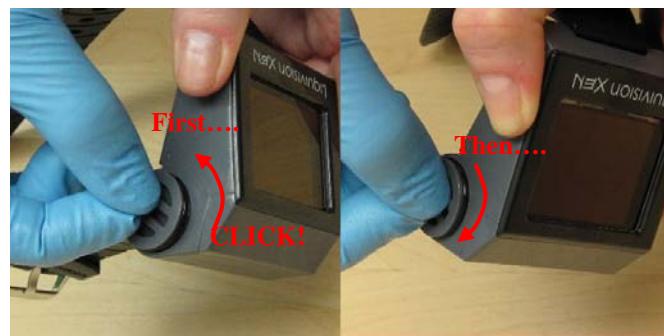
Make sure to insert the holder with the battery facing up by aligning the lower part of the battery holder parallel to the unit’s bottom

Gently push the holder all the way into the compartment. DO NOT FORCE IT! It should have a tight but smooth fit.



12. Screw in the battery cap

1. Place the cap lightly in the opening
 2. **First...** Turn counterclockwise until it “clicks” – this will help align the threads.
 3. **Then...** turn clockwise to tighten the cap.
If something feels wrong, stop and start again.
- ⚡ DO NOT force the cap – you could damage the threads!



Screw the battery cap on the compartment using your fingers. NEVER overtighten the battery cap. User your fingers, NEVER use a coin.



OPTION- CHANGE O-RING

If the O-ring looks dry, cracked or worn, you may like to change the O-ring in the battery cap. If you wish to do this, continue with Step 13.

WARNING

Attention, LYNX T1 Transmitter owners:

Please note that the O-rings that were provided with the XEN, XEO, and KAON before June 1st 2013 are NOT compatible with LYNX T1Transmitters.

For more information about O-ring compatibility, please consult:

http://www.liquivision.com/docs/Lynx_User_Manual.pdf

13. Remove O-ring by squeezing with fingers

- Slide your fingers along the sides of the battery holder, squeezing tightly, to make the O-ring stick out a bit
- Then, grab the edge of the O-ring and slide it off



DO NOT USE PLIERS

- ↗ DO NOT use pliers or any tool to remove the O-ring, because you can scratch the casing plastic and damage it. This can prevent a good O-ring seal in the future.



14. Inspect the new O-ring for dust or defects

- ↗ DO NOT use a dusty O-ring!
- If the new O-ring is not clean, wash it with clear water and let it air-dry

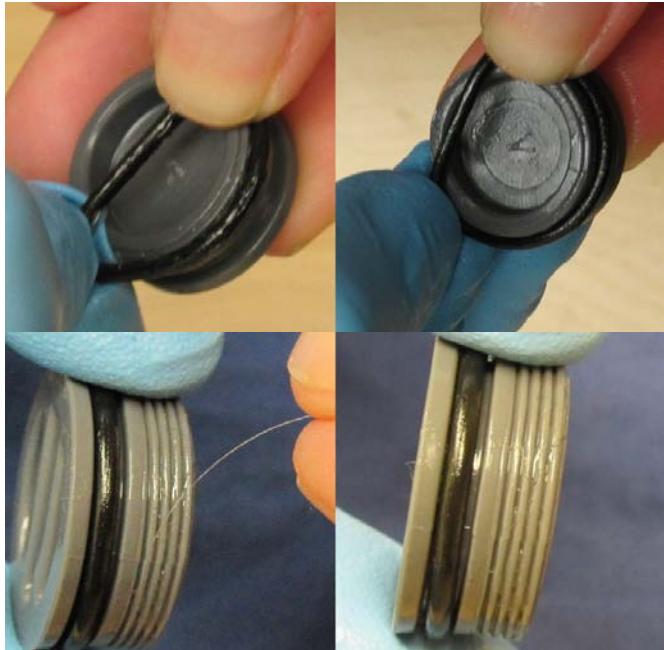


15. Lubricate the new O-ring

- Use silicone O-ring lubricant
- Apply a tiny amount to a dry O-ring (it will not absorb properly if the O-ring is wet)
- Roll the O-ring between your fingers to spread the lubricant
- Remove any excess lubricant with your fingers

**16. Ease O-ring onto battery cap**

- Starting at one side, gently ease O-ring over the battery cap

**17. Check again for any dust or debris**

- Remove any debris
- If there is something really stuck to the O-ring, better remove it, clean it and start again

**19. Screw in the battery cap**

1. Place the cap lightly in the opening
 2. **First...** Turn counterclockwise until it “clicks”
– this will help align the threads.
 3. **Then...** turn clockwise to tighten the cap.
If something feels wrong, stop and start again.
- ⚡ DO NOT force the cap – you could damage the threads!

Screw the battery cap on the compartment using your fingers. NEVER overtighten the battery cap. Use your fingers, NEVER use a coin.



XEN PC INTERFACE

The XEN PC Interface can be used to download your dives and to update your XEN software. This requires a few different steps which vary slightly depending on whether you are a PC or a Mac OS X user.

- 1) PC Users: Install Drivers onto your PC, so your PC knows how to “talk” to the PC interface.
- 2) All Users: Install the Liquivision Dive Logger onto your PC, so your PC knows how to interpret the dive log data emitted by the XEN.
- 3) All Users: Install the Liquivision Firmware Updater onto your PC, so your PC knows how to transmit a Firmware Update to your XEN
- 4) All Users: Install Liquivision Firmware Updates onto your XEN.

We will walk you through all these steps in some detail, with links to all the relevant downloads.

IMPORTANT

Installing new software on your XEN may reset your unit's memory.

This could delete your dive logs and PIN number(s) stored on your unit. For this reason, prior to starting the install, you should make sure:

You have downloaded any dive logs

You have your free XEN Unlock PIN Code available

If You Are a PC User You First Need To Install Drivers Onto Your PC

Before you can download dive logs or upgrade your XEN firmware, you need to download and install the appropriate drivers for your PC or Mac. The drivers are made by FTDI. If you are technically-minded and want more information on them, you can visit www.ftdichip.com.

Make sure that your XEN PC interface is NOT plugged in to your desktop computer. If it is plugged in, then please UNPLUG it before proceeding.

PC Drivers: Internet Explorer

- Click to download the driver install package.
(<http://liquivision.com/downloads/EnlightenedDriversSetup.exe>)
- You will be asked if you want to "Run" or "Save" the program. Click "Run."
- The file will download and launch.
- The drivers will be installed. You will briefly see a black window pop up and then disappear.
- If you do NOT see the black command window pop up for several seconds, then please repeat the process.
- Once the black command window has appeared and finished (disappeared), then plug in the XEN PC interface into your desktop computer. Plug the USB cable into the XEN PC interface box, and then plug the other end of the USB cable into your PC. The "Found New Hardware" wizard will launch. Click "Do not connect to the Internet", and continue the prompts. At the end, Windows should inform you that your "New Hardware is Ready to Use."

PC Drivers: Firefox

- Click to download the driver install package.
(<http://liquivision.com/downloads/EnlightenedDriversSetup.exe>)
- You will be asked if you want to save the file. Click "Save File."
- The downloads window will pop up (if it does not, go to Tools->Downloads)
- The top item in the downloads window will be "EnlightenedDriversSetup.exe". Double click on it.
- You will be asked "Are you sure you want to launch EnlightenedDriversSetup.exe"? Click OK.
- The drivers will be installed. You will briefly see a black window pop up and then disappear.
- If you do NOT see the black command window pop up for several seconds, then please double click on "EnlightenedDriversSetup.exe" for a second time, in the downloads window.
- On some computers, anti-virus software will clear the download window automatically. If that is the case on your computer, you will need to browse to your personal downloads folder, and launch EnlightenedDriversSetup.exe from there directly.
- Once the black command window has appeared and finished (disappeared), then plug in the XEN PC interface into your desktop computer. Plug the USB cable into the XEN PC interface box, and then plug the other end of the USB cable into your PC. The "Found New Hardware" wizard will launch. Click "Do not connect to the Internet", and continue the prompts. At the end, Windows should inform you that your "New Hardware is Ready to Use."

PC Drivers: Google Chrome

- Click to download the driver install package.
(<http://liquivision.com/downloads/EnlightenedDriversSetup.exe>)
- When the download is finished, a tab will appear in the far lower left corner of Chrome.
- Left click on the "EnlightenedDriversSetup.exe" tab that appears in the far lower left corner of Chrome.
- You will be prompted to run the program, click "Run."
- The drivers will be installed. You will see a black command window pop up and then disappear.
- If you do not see the black command window, please click on the "EnlightenedDriversSetup.exe" tab on the lower left of the screen, for a second time.

- Once the black command window has appeared and finished (disappeared), then plug in the XEN PC interface into your desktop computer. Plug the USB cable into the XEN PC interface box, and then plug the other end of the USB cable into your PC. The "Found New Hardware" wizard will launch. Click "Do not connect to the Internet", and continue the prompts. At the end, Windows should inform you that your "New Hardware is Ready to Use."

Advanced Users

If you are an advanced PC user and would like more information, click:

(<http://www.ftdichip.com/Drivers/D2XX.htm>) to visit the FTDI's website, and select your OS and install the latest version of the D2XX drivers manually.

If You Are a Mac OS X User Please Proceed With The Next Step

There is no need to install the driver on your Mac OS X Computer. The drivers will automatically be installed when installing the Dive Logger or the Firmware Updater

Then You Can Install the Liquivision Dive Logger Onto Your Computer

The Liquivision Dive Logger program allows you to download your dive logs from your XEN. In order to use it you must have the XEN PC interface device and if you are a PC user the FTDI drivers must be installed on your computer (as described above).

PC Dive Logger: Internet Explorer

- Go to the Enlightened Series Software Downloads page to download the latest Liquivision Dive Logger installation package: (http://liquivision.com/downloads/ES_SoftwareDownloads.php)
- Scroll to the bottom and click on the Dive Logger link under Windows Users.
- You will be asked if you want to "Run" or "Save" the program. Click "Run."
- The file will download and the install wizard will launch.
- Follow the wizard and the Liquivision Dive Logger software will be installed.
- The wizard will install a shortcut to the Liquivision Dive Logger on your desktop. To launch the logger, double click on the shortcut. Create a username for yourself, and you're ready to go!

PC Dive Logger: Firefox

- Go to the Enlightened Series Software Downloads page to download the latest Liquivision Dive Logger installation package: (http://liquivision.com/downloads/ES_SoftwareDownloads.php)
- Scroll to the bottom and click on the Dive Logger link under Windows Users.
- You will be asked if you want to save the file. Click "Save File."
- The downloads window will pop up (if it does not, go to Tools->Downloads)
- The top item in the downloads window will be "LVDiveLogSetup.exe". Double click on it.
- You will be asked "Are you sure you want to launch LVDiveLogSetup.exe"? Click OK.
- Follow the wizard and the Liquivision Dive Logger software will be installed.
- The wizard will install a shortcut to the Liquivision Dive Logger on your desktop. To launch the logger, double click on the shortcut. Create a username for yourself, and you're ready to go!

PC Dive Logger: Google Chrome

- Go to the Enlightened Series Software Downloads page to download the latest Liquivision Dive Logger installation package: (http://liquivision.com/downloads/ES_SoftwareDownloads.php)
- Scroll to the bottom and click on the Dive Logger link under Windows Users.
- When the download is finished, a tab will appear in the far lower left corner of Chrome.
- Left click on the "LVDiveLogSetup.exe" tab that appears in the far lower left corner of Chrome.
- You will be prompted to run the program, click "Run."
- Follow the wizard and the Liquivision Dive Logger software will be installed.
- The wizard will install a shortcut to the Liquivision Dive Logger on your desktop. To launch the logger, double click on the shortcut. Create a username for yourself, and you're ready to go!

Mac-OSX Dive Logger (all browsers)

PLEASE NOTE: The Mac-OS X Dive Logger is only compatible with Snow Leopard and Lion (not with Leopard or any earlier versions of Mac OS).

- Go to the Enlightened Series Software Downloads page to download the latest Liquivision Dive Logger installation package: (http://liquivision.com/downloads/ES_SoftwareDownloads.php)
- Scroll to the bottom and click on the Dive Logger link under Mac OS X Users.
- The downloads window will pop up (if it does not, go to Tools->Downloads)
- The top item in the downloads window will be "Mac-1.71.dmg". Double click on it.
- It will mount as a drive where you then see the Liquivision Loader and the Liquivision Dive Logger.
- To install those two programs drag each one of them into the Applications folder.
- You can then start the programs by selecting them from your Applications folder by double-clicking them. Alternatively you can also launch them from your Launchpad. Create a username for yourself, and you're ready to go!

How To Connect the XEN PC Interface To Your Computer

- Connect the USB cable provided to your PC and to the PC Interface
- At this point, you should get a message “New Hardware Detected”
- Place the XEN unit on its side, with the PC interface aiming for the eight holes on the backplate
- The distance from the PC interface to the XEN should be 2-4 cm or 1-2 inches



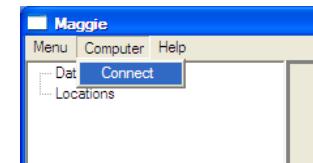
How To Launch A Dive Log Download

You can download your dive logs onto your Computer, either by using the Liquivision Dive Logger or any other available dive logging program that supports downloading logs from your XEN bottom timer. To download your dives, first:

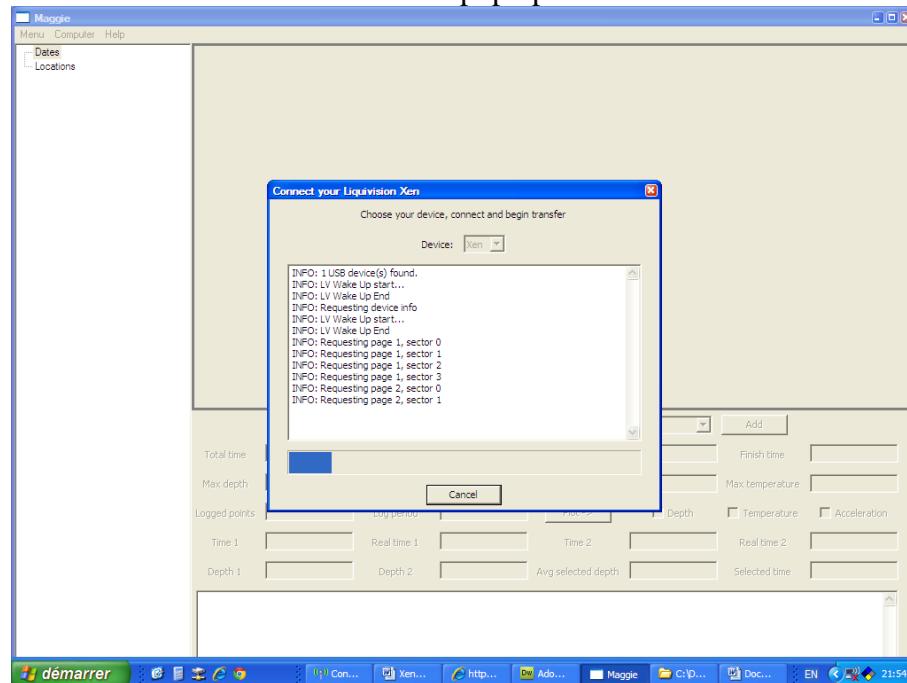
- Make sure the XEN FTDI drivers have been installed on your computer (applies to Windows users only) ([Instructions](#)).
- Make sure the Liquivision Dive Logger has been installed on your computer ([Instructions](#)).
- Then launch the Dive Logger program by double-clicking on the shortcut on your PC desktop (Windows) or by selecting it in your Applications Folder or your Launchpad (Mac OS X).
- Make sure the XEN PC Interface is properly connected to your computer ([Instructions](#)).

Then, pretty quickly:

- Pick up your XEN and turn on its wireless transmitting function:
 - tap it three times to wake it up
 - tap it three times again to enter menu mode
 - tap down through the menu options until you reach “Connect To PC”
 - tap the side of your XEN to select this option
 - you will see a message “WAIT FOR PC”
- Replace your XEN in alignment with the PC Interface.
- Return to the Dive Logger Software and turn on its transmitting function:
 - Select “Computer” from the top menu
 - Select “Connect”



You should see a window like this pop up:



The Dive Logger will download all your dives (this will take a few minutes) which will then show up in the right column of the program. Once the dives are downloaded you can assign Dive Locations to each dive and record extra notes.

How To Install The Liquivision Firmware Updater Onto Your PC

In order to update the firmware inside your XEN, you need the XEN PC interface device, and you need to install a utility called the "Liquivision Firmware Updater." If you do not have a XEN PC interface and you would like to update the firmware on your unit, your dealer should be able to do it for you.

PC Firmware Updater: Internet Explorer

- Go to the Enlightened Series Software Downloads page to download the latest Liquivision Firmware Updater installation package: (http://liquivision.com/downloads/ES_SoftwareDownloads.php)
- Scroll to the bottom and click on the Firmware Updater link under Windows Users.
- You will be asked if you want to "Run" or "Save" the program. Click "Run."
- The file will download and the install wizard will launch.
- Follow the wizard and the Liquivision Firmware Updater will be installed.

PC Firmware Updater: Firefox

- Go to the Enlightened Series Software Downloads page to download the latest Liquivision Firmware Updater installation package: (http://liquivision.com/downloads/ES_SoftwareDownloads.php)
- Scroll to the bottom and click on the Firmware Updater link under Windows Users.
- You will be asked if you want to save the file. Click "Save File."
- The downloads window will pop up (if it does not, go to Tools->Downloads)
- The top item in the downloads window will be "LVFirmwareSetup.exe". Double click on it.
- You will be asked "Are you sure you want to launch LVFirmwareSetup.exe"? Click OK.
- Follow the wizard and the Liquivision Firmware Updater will be installed.

(If for some reason the downloads window is empty, then browse to the location that Firefox stores downloaded files, and double click on LVFirmwareSetup.exe from there).

PC Firmware Updater: Google Chrome

- Go to the Enlightened Series Software Downloads page to download the latest Liquivision Firmware Updater installation package: (http://liquivision.com/downloads/ES_SoftwareDownloads.php)
- You will be asked if you want to save the file. Click "Save File."
- When the download is finished, a tab will appear in the far lower left corner of Chrome.
- Left click on the "LVFirmwareSetup.exe" tab that appears in the far lower left corner of Chrome.
- You will be prompted to run the program, click "Run."
- Follow the wizard and the Liquivision Firmware Updater will be installed.

Mac-OSX Firmware Updater (all Browsers)

PLEASE NOTE: The Mac-OS X Firmware Updater is only compatible with Snow Leopard and Lion (not with Leopard or any earlier versions of Mac OS).

- Go to the Enlightened Series Software Downloads page to download the latest Liquivision Firmware Updater installation package: (http://liquivision.com/downloads/ES_SoftwareDownloads.php)

- Scroll to the bottom and click on the Firmware Updater link under Mac OS X Users.
- You will be asked if you want to save the file. Click "Save File."
- The downloads window will pop up (if it does not, go to Tools->Downloads)
- The top item in the downloads window will be "Mac-1.71.dmg". Double click on it.
- It will mount as a drive where you then see the Liquivision Loader (Firmware Updater) and the Liquivision Dive Logger.
- To install those two programs drag each one of them into the Applications folder.
- You can then start the programs by selecting them from your Applications folder by double-clicking them. Alternatively you can also launch them from your Launchpad.

How To Install the Newest Firmware On Your XEN

You should always run the latest and most recent software on your XEN. You may already have the latest version, which makes an upgrade unnecessary. You can find out which version you are running and whether you need to upgrade by comparing your software version (which you find under Preferences --> Status) to the XEN Software History

(<http://liquivision.com/downloads/XENSoftwareHistory.php>). Some early versions of the software have minor bugs which were fixed in later versions.

If you have determined that your software should be upgraded, follow the steps below. For starters:

- Make sure the XEN FTDI drivers have been installed on your computer (Windows only) ([Instructions](#)).
- Make sure the Liquivision Firmware Updater has been installed on your computer ([Instructions](#))
- Connect the XEN PC interface to your computer with the included USB cable ([Instructions](#))
- Make sure the USB cable is plugged into the XEN PC interface (see photo below)
- Place the XEN on the desk, on its side, with the PC interface aiming for the eight holes on the backplate (see photo below)
- The distance from the PC interface to the XEN should be between 2cm and 4cm (1-2 inches).

PC: Internet Explorer Firmware Install

- Click XEN Software History <http://liquivision.com/downloads/XENSoftwareHistory.php> to download the latest XEN firmware. The first file at the top of the page will be the most recent version.
- You will be asked if you want to "Open" or "Save" the program. Click "Open."
- The file will download and the Liquivision Firmware Updater will automatically launch.
- You should see something like this:



Click OK, then click UPLOAD.

For further instructions, please see the “All Users” section, below.

PC: Firefox Firmware Install

- Click XEN Software History <http://liquivision.com/downloads/XENSoftwareHistory.php> to download the latest XEN firmware. The first file at the top of the page will be the most recent version.
- You will be asked to open the file with the suggestion "liquivision.lvp". Click Open then OK.
- The Liquivision Firmware Installer should launch and you should see something like this:



Click OK, then click UPLOAD.

For further instructions, please see the “All Users” section, below.

PC: Google Chrome Firmware Install

- Click XEN Software History <http://liquivision.com/downloads/XENSoftwareHistory.php> to download the latest XEN firmware. The first file at the top of the page will be the most recent version.
- When the download is finished, a tab will appear in the far lower left corner of Chrome.
- Left click on the "XENFirmware.lvp" tab that appears in the far lower left corner of Chrome.
- You will be prompted to open the file, click "Open."
- You should see something like this:



Click OK, then click UPLOAD.

For further instructions, please see the “All Users” section, below.

Mac-OSX Firmware Install (all Browsers)

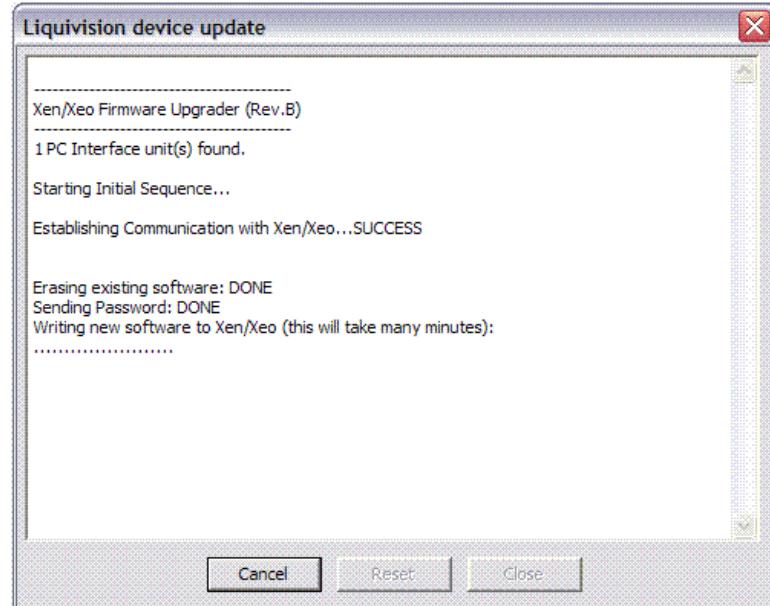
- Click XEN Software History (<http://liquivision.com/downloads/XENSoftwareHistory.php>) to download the latest XEN firmware.
- The first file at the top of the page will be the most recent version.
- Download the file onto your Computer
- You can then either doubleclick the file. The firmware updater will launch automatically and you should see something like this:



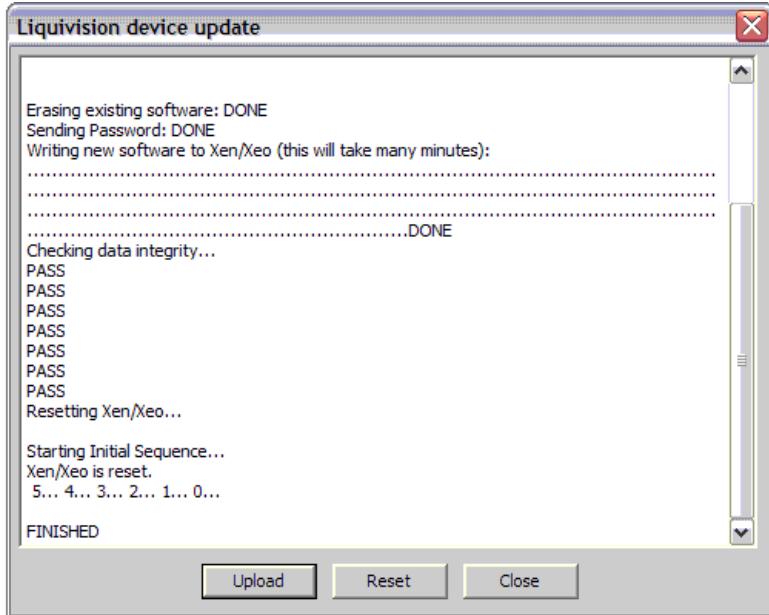
- Alternatively you can launch the firmware updater from your Applications and browse for the file on your computer
- Then click OK
- On the next screen click UPLOAD

All Users

Once you click UPLOAD, you should see something like this:



After several minutes of further data transfer, the install will finish and you should see this:



If you do NOT see the seven words "PASS" as shown above, or six words "PASS" followed by a "FAIL" (this is OK too) then the install did not succeed and you should try again.

If the install succeeded, you should now be able to pick up your XEN and use it. To verify that the install succeeded, enter the main menu, and go to Preferences->Status, and the software version should be the same as the version that you tried to install (i.e. 1.09 or something like that).

SUPPORT CONTACTS

For general information, please visit www.liquivision.com.

If you need immediate assistance, we recommend that you contact your XEN dealer.

If you need further help, please contact us via: www.liquivision.com/contact.php.